

ABSTRACT

An electrochemical gas probe capable of measuring an amount of gas in a molten metal. The probe comprises a sensing unit that includes a reference electrode, a sensing electrode, a solid-state reference mixture adjacent to the reference electrode, and a conductor between the reference electrode and a sensing electrode. The probe also comprises a supporting unit that includes a main support, a protection cover and a stabilizing material, wherein the stabilizing material is between the sensing unit and the protection cover of the supporting unit. By using a solid-state reference material, the change of hydrogen content in molten aluminum may be conveniently monitored during a degassing process.